SECTION 2

SUPPORTING DOCUMENTS FOR WETLANDS AND AQUATIC HABITAT

September 19, 2003

From:
Charles M. Frechette
Sebago Lake Marina

REF:
Letter of September 16, 2003
From Dana Murch Maine DEP
"no current evidence of any significant
impacts from Eel Weir Project"

The Dams Hydro Power Supervisor recently sent a letter that stated the "DEP staff" had reviewed "available information relating to the impact of the current water level regime on wetlands associated with Sebago Lake".

Attached was a letter from Jeanne L. DiFranco of the Portland office of the DEP. The letter discusses her paper analysis of mostly paper analysis. Sebago Lake deserves better. There is a Lakes Division of the DEP and to my knowledge that "Staff" has not been involved with the the third largest lake in New England. Shouldn't that staff review what the levels of Sebago Lake should be? Shouldn't they be involved with actual field trips to observe impacts to Sebago Lake dropping to the lowest it had been in thirty years, draining 900 acres of wetlands and shallows of Sebago? The issues and impacts to Sebago cannot by assessed from Augusta or Portland.

Here are some quotes from a report done by IF&W in 1992 by Sonney Pierce and Warren Eldrige who visited the lake "monthly beginning the first of August, 1991 and extending through December 2, 1991." Levels in this time ranged from 264.3 feet mean sea level to 262.7 feet mean sea level. The current legal limit of the lake is 267.16 MSL, and the current plan reaches 262.5 MSL on November first, and drops to 261 MSL two out of nine years. Some of their conclusions and recommendations were:

"All fish species would be severely impacted in the wetlands/backwater area northwesterly of Harmon's Beach at water levels less than 264 ft. MSL."

"Winter draw downs below 260 or 261 ft. could impact Turtle Cove water quality by reducing mixing and flushing rates. This could result in a localized fish kill."

"It would be necessary to hold water levels at 264.0 ft MSL or higher to avoid impacts and displacements of fish and wildlife species from the area northwesterly of Smith Road in Sticky River Cove, the wetland /backwater area northwesterly of Harmon's Beach, the upper end of Sebago Cove and the thoroughfares around the island at the mouth of Turtle Cove."

"Water control structures could be installed to maintain appropriate water levels in the wetlands adjacent to Harmon's Beach and above Smith Road in Sticky River Cove. Such structures would mitigate most of the perceived impacts to wildlife in these two large wetland areas."

The latest DEP letter stated that there was no evidence of **ANY** significant impacts to wetland functions or values. Are fish in Harmon's Beach wetlands not "significant"?

The current plan stamped for approval by DEP says the lake must go below 261 msl despite the likelihood of fish kills in 65 acre Turtle Cove.

Eleven years later, not one person from IF&W or DEP has followed through with construction of structures to improve the wetlands. It should be noted that this solution does not work for the majority of Sebago Lake wetlands

In a letter of November 28, 2002 with respect to the Eel Weir licensing process to the Federal Energy Regulatory Commission. John P Warner and Larry Miller of the US Fish and Wildlife Service stated in the "SPECIFIC COMMENTS" section.

"Lowered water levels in the fall can dewater aquatic beds and render them unsuitable as cover and foraging areas for wildlife."

"Sustained low water levels through the winter may make aquatic beds unsuitable for wildlife that overwinter in mud, or under cover of water and ice.".

"Continued lowering of water levels can kill hibernating wildlife exposed in the drawdown zone"

"Forested wetlands are impacted when lake level fluctuations dewater the soils and allow the frost line to penetrate deeper into the ground, thereby diminishing their value to hibernating amphibians and reptiles."

"Lowered water levels in the fall and winter also affect the distribution and species composition of vegetated wetlands, especially aquatic beds and emergent wetlands, by expsoing the plants to freezing and desiccation."

"We note that current operations will continue to impact fish and wildlife resources that utilize the littoral zone. We recommend that any license for the project contain terms and conditions that will eliminate or minimize these impacts. Such measures should include limits on the degree and seasonal occurrence of the drawdowns."

In a recent phone conversation with Francis Brautigan the fisheries biologist for Sebago, he noted that electro fishing in the Songo River produced far fewer fish than the habitat suggests it should support. He noted that this was likely do to the severity of the winter drawdowns.

It is clear from actual field observations that impacts occur when the lake is below 264 MSL, and it is clear that at elevations below 262.7 msl these impacts are severe. The current lake level plan reaches elevation 264 MSL on or about the first week in September. The lake was below that level last year from September to May (8 months) and below 263 MSL for five and a half months. Levels below 263 dewater most of Sebago wetlands and that occurs during the fall and winter when US Fish & Wildlife says severe impacts do occur because of low water.

I have observed the wetlands of the Northwest River on a daily basis during all seasons since 1983. The lowering of the lake beginning in 1991 has had SIGNIFICANT IMPACTS to the vegetation and the fish and wildlife. The almost 4000 days that I have spent on, at, by, overlooking, listening to, and smelling (dead vegetation smells) or in the wetlands where I live should give me some insight to what changes have occurred, and certainly more than a review of mostly paper analysis and low order field studies. I will guess that the DEP will not opt to change

current lake level plan. Their STAFF finds "Based on the material provided, there is no current evidence of any significant impacts from this project to Sebago Lake."

As Alexander Hamilton once said;

"*When men exercise their reason coolly and freely on a variety of distinct questions, they inevitably fall into different opinions on some of them. When they are governed by a common passion, their opinions, if they are to be called, will be the same.*"

Little did we, who live on Sebago lake know that when the Dams Hydro Power Supervisor stated that "the State Park will have a beach", in reference to Tassle Top, that the other State agencies would govern with the same passion.

Sincerely,

Charles M. Frechette
Box 199
Sebago, Maine 04029

Call 207-787-2444
e-mail Sebagolakemarina@hotmail.com

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

September 16, 2003

Charlie Frechette
Sebago Lake Marina
PO Box 199
East Sebago, ME 04029

RE: Sebago Lake Wetlands Review

Dear Charlie:

In response to several requests you have made in recent months, the DEP staff has reviewed the available information relating to the impact of the current water level regime on the wetlands associated with Sebago Lake.

The DEP staff has concluded that there is no current evidence of any significant impacts from the Eel Weir Hydro Project to Sebago lake vegetative communities or associated wetland functions and values. A copy of the staff review is enclosed.

If you have any further questions on wetlands issues, please feel free to contact our wetlands reviewer, Jennie DiFranco, directly at our Portland office at the phone number provided.

Sincerely,

Dana Paul Murch
Dams & hydro Supervisor

Enclosure

cc: Roy Bouchard, DEP
Jennie DiFranco, DEP
Steve Timpano, IF&W
Francis Brautigam, IF&W-Gray (Fisheries)
Phil Bozenhard, IF&W-Gray (Wildlife)
Larry Miller, USF&WS

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 764-1507

web site: www.state.me.us/dep

AN EVALUATION OF PERCEIVED IMPACTS TO FISH AND WILDLIFE ASSOCIATED WITH WATER LEVEL MANAGEMENT AT SEBAGO LAKE DURING THE SUMMER AND FALL OF 1991

PREPARED FOR:

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION # 17
AUGUSTA, MAINE 04333

PREPARED BY:

SONNY PIERCE, FISHERY BIOLOGIST
WARREN ELDRIDGE, WILDLIFE BIOLOGIST

DEPARTMENT OF INLAND FISHERIES AND WILDLIFE
STATE HOUSE STATION # 41
AUGUSTA, MAINE 04333

JANUARY 1992

RECOMMENDATIONS

Based on the observations made by the Department of Inland Fisheries and Wildlife staff during the summer and fall of 1991, it is recommended that water levels be at full pond and/or stable during the major portion of May. This is critical for spawning fish and breeding wildlife. Any draw downs through the summer should be gradual to allow fish and wildlife species to adjust to changing water levels and changing habitat conditions.

Fall draw downs would impact winter denning of aquatic mammals in portions of Sticky River, the wetland/ backwater area northwesterly of Harmon's Beach, and the upper end of Sebago Cove. Other than the wetland/backwater area northwesterly of Harmon's Beach, no fish species would be affected providing excessive draws on the lake were not made during October. All fish species would be severely impacted in the wetland/backwater area northwesterly of Harmon's Beach at water levels less than 264 ft. MSL. This is the only area around Sebago Lake where impacts to fish would be severe at levels less than 264 ft. MSL.

Winter draw downs below 260 or 261 ft. MSL could impact Turtle Cove water quality by reducing mixing and flushing rates. This could result in a localized fish kill.

It would be necessary to hold water levels at 264.0 ft. MSL or higher to avoid impacts and displacements of fish and wildlife species from the area northwesterly of Smith Road in Sticky River Cove, the wetland/backwater area northwesterly of Harmon's Beach, the upper end of Sebago Cove, and the thoroughfares around the island at the mouth of Turtle Cove. Any water levels less than 264 ft. MSL would impact fish and wildlife in these few localized areas. Water control structures could be installed to maintain appropriate water levels in the wetlands adjacent to Harmon's Beach and above Smith Road in Sticky River Cove. Such structures would mitigate most of the perceived impacts to wildlife in these two large wetland areas.

Not a Full Copy of Report

Maine Department of Inland
Fisheries and Wildlife
358 Shaker Road
Gray, Maine 04039

Telephone: 207-657-2345 ext.112
Fax: 207-657-2980
Email: francis.brautigam @maine.gov

John E. Baldacci,
Governor

Roland D. Martin,
Commissioner

July 28, 2003

Magalie R. Salas, Secretary
Federal Energy Regulatory Agency
888 First Street, N.E.
Washington, D.C. 20426

RE: Eel Weir Hydroelectric Project No. 2984-042

Dear Ms Salas:

The following comments are filed on behalf of the Maine Department of Inland Fisheries and Wildlife, Fisheries Division. The Fisheries Division has management jurisdiction over fishery resources that reside in inland waters of Maine. Eel Weir Project operations may effect fishery resources associated with Sebago Lake and the Presumpscot River, which are both of significant regional and statewide importance.

The Fisheries Division has been actively involved in FERC's relicensing of Eel Weir Dam. The final license application was formally reviewed and subsequent MDIFW fisheries comments (dated May 8, 2002) were filed with FERC. Comments (dated December 12, 2002) were also filed as part of the EA scooping process. FERC staff is requested to reference these comments to identify issues developed and addressed in the Environmental Assessment. The purpose of this correspondence is to provide a summary and clarification of previously identified fisheries issues.

1) Modification of the 1997 Lake Level Management Plan to suppress lake trout spawning success. The MDIFW has implemented numerous regulatory and stocking changes over the last 10 years in an effort to control a burgeoning, introduced population of lake trout. An over-abundant lake trout population has significantly compromised our ability to maintain a healthy rainbow smelt forage population, which is critical restoring the native landlocked salmon fishery. Sebago Lake is one of only four waters in Maine that originally supported indigenous populations of landlocked salmon. The MDIFW has drastically curtailed supplemental stocking of landlocked salmon to further reduce smelt predation, and in fact this year only a 1,000 salmon were stocked to maintain a small spawning run for future hatchery propagation. Over a number of years lake trout harvest regulations have been liberalized to the extent socially acceptable and smelt eggs have been stocked to enhance smelt recovery. Management efforts to date have not been successful in managing this fishery crisis and more drastic measures are being considered in an effort to rebuild the native salmon fishery. One management option of interest is the use of

management plan. Warmwater species occupy littoral zone habitat, which is most likely to be affected by lake water level management practices. Limited information to date suggests there have been changes in Sebago's warmwater fish community. "Winter kill" has been documented in at least one cove. In the 1980's white perch populations once provided exceptional spring fisheries and now offer little to spring anglers. Anglers have also observed a decline in the abundance of minnow species. These changes could be related to the seasonal availability of suitable habitat. In Section E.2-15 the applicant explains why the study was not provided. It is recognized that any historical assessment of fisheries predates existing and current operations and therefore could be viewed as "not relevant". However, an assessment of existing warmwater fisheries is certainly relevant and necessary. Baseline information on popular warmwater fisheries (largemouth bass, smallmouth bass, black crappie, white perch, chain pickerel and littoral baitfish communities) would provide a direct measure of resource health that could not be obtained from the completed lake level habitat assessment study. While this latter study provides some insight regarding seasonal habitat limitations that could impact the health and abundance of warmwater fisheries, there were no provisions to directly measure the current health of Sebago's warmwater fisheries under the current lake water level management plan. At the request of MDIFW similar baseline studies had been performed on the other 5 Presumpscot River projects owned by SAPPI that are also currently undergoing relicensing. The baseline information collected on those projects has proven beneficial in developing sound recommendations for project operations. It is worthy to note that warmwater fisheries have only more recently grown in popularity and are receiving increasing attention by MDIFW. The collection of baseline information on Sebago's warmwater fisheries is essential to understanding the full impact of current lake level management practices.

Furthermore, for reasons unrelated to the above study request the MDIFW recently sampled considerable littoral habitat using an electrofishing boat. Areas sampled included the Songo River, Muddy River, mouth of the Songo River, and Kettle cove. Under the water levels that existed at the time of sampling the seasonal habitat for warm water species of fish was considered very good to excellent, yet low numbers of most species were observed. A lack of suitable year-round habitat, resulting from the winter drawdown is likely responsible for lower than expected populations of warmwater fish species. Available information on record, as well as recent electrofishing surveys indicate warmwater fisheries have been negatively impacted by the current lake water operations and the need for mitigation should be given careful consideration.

Smelt migration barriers resulting from project operations. At the request of the USFWS the applicant conducted a smelt spawning survey to assess the effects of low lake levels in the spring on smelt spawning migration. The applicant concluded in the license application (Section E.2) "that lake levels have a minimal impact on smelt access at normal spring water levels". Yet, the actual study report identified two popular smelt spawning streams (Nason's Brook and Thompson's Point Brook) where barriers to smelt migration were caused by spring low water levels, resulting from Eel Weir Dam operations. The applicant is requested to mitigate for this important resource impact.

Lost fishing opportunity during peak angling periods in the Eel Weir Bypass Channel. In contrast to SAPPI's determination that "Operation of the Eel Weir Project does not appear to adversely impact aquatic resources in the bypass reach" (License application Section E.2-22, project impacts), impacts actually have occurred. In recent years project operations have adversely impacted angling opportunity in the heavily used bypass. SAPPI contends that spillage to the bypass in excess of flows that are conducive to fishing occurred less than 6% of the time in the last two years. Sappi contends that "high flow events are rare in the bypass reach, and any potential impacts to anglers resulting from operation of the Eel Weir Project are

REPORT ON SEBAGO LAKE WATER LEVELS

Maine Department of Environmental Protection

March 27, 1992

Prepared By:
DEP Dams and Hydro Unit

DIF&W reports that several species of warmwater fishes were likely to have been slightly to moderately impacted by the range of water levels during 1991. These species include yellow perch, black crappie, pickerel, sticklebacks, and others that seek shallow or weedy areas for part or all of their life cycles. No fish species were reported to be moderately to severely impacted by 1991 water levels. This is due to the fact that the majority of the lake provides a deep-water aquatic habitat that is not affected by changes in lake levels.

DIF&W reports that several species of waterfowl (black ducks, wood ducks, mallard, hooded merganser, great blue heron, kingfisher) and aquatic mammals (otter, muskrat) were likely to have been slightly to moderately impacted as a result of decreasing availability of feeding habitat during the late summer and fall drawdown of the lake. No wildlife species were reported to be moderately to severely impacted by 1991 water levels. It is likely that historic water level fluctuations have already limited the populations of those wildlife species most sensitive to these changes.

DIF&W reports that lake levels would have to be held about elevation 264 to avoid impacts on and displacements of fish and wildlife species in the upper end of Sticky River Cove, in the wetland north of Harmon's Beach, in the upper end of Sebago Cove, and in the thoroughfares at the month of Turtle Cove. DIF&W suggests that water control devices could be installed to maintain water levels in several of these wetland areas (especially in Sticky Cove and the wetland north of Harmon's Beach) and to thereby mitigate the impacts of future changes in lake levels.

Finally, DIF&W reports that the dumping of extra water from the lake during October of 1991 created heavy currents which may have attracted landlocked salmon to the Whites Bridge and Basin areas during their spawning season. DIF&W therefore recommends that any future future drawdown be gradual throughout the month of October.

IV. REVIEW OF 1991 WATER LEVEL PLAN

On February 29, 1992, the DEP hosted a public meeting at St. Joseph's College in Standish to solicit comments on Sebago Lake water levels during 1991. Over 250 people attended the half-day meeting, and many spoke as individuals or on behalf of organizations. A report was presented by S.D. Warren, as well as by each of the agencies which conducted a study during 1991.

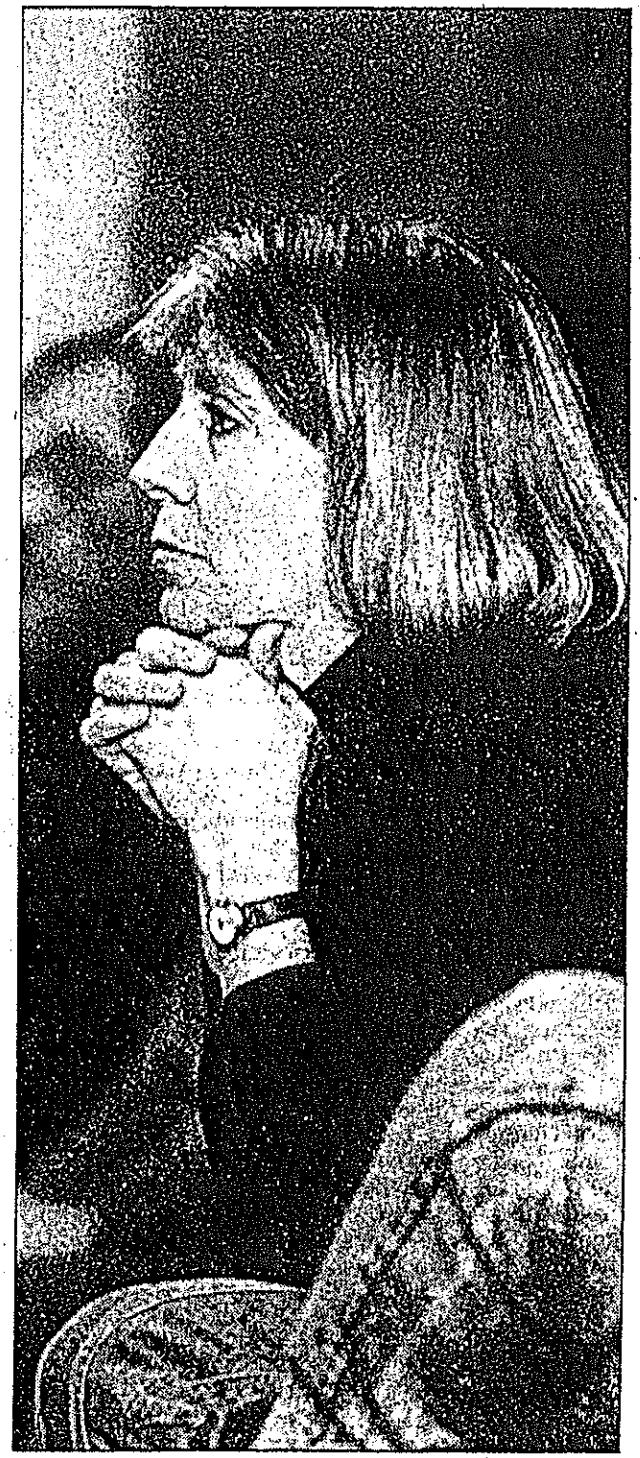
In addition to the comments made at the February 29 meeting, the DEP has received written comments from a number of individuals and organizations. Among the organizations who have submitted oral or written comments are the following:

Frye Island Municipal Services Corporation
Sebago Lake Marina Owners Association
Friends of Sebago Lake

MAINE Telegram SUNDAY

/New England

SECTION B



Julie Moore of Raymond listens to Saturday's discussion at St. Joseph's College.

Water level hearing looks at DEP plan

A meeting attended by more than 250 indicates there is no easy solution to Sebago's problem.

By JASON WOLFE
Staff Writer

STANDISH – Gerald A. Spencer says he can sympathize with Sebago Lake boaters, cottage owners and marina operators who say lower lake levels last year spoiled their fun and hurt business.

But right now his main concern is trying to restore tap water to his lakeshore home off White's Point Road in Standish.

Spencer, who draws water directly from the lake, blames a frozen water line on low lake levels that left pipes exposed. The line had not iced up during his previous nine years there.

"It could cost me $10,000 to drill a well, when I live next to the lake. Is that what I have to do now?" Spencer asked.

Spencer brought his complaint to St. Joseph's College on Saturday, where he joined more than 250 people who gathered to discuss a state-sponsored lake level management plan on Maine's second largest lake.

The Maine Department of Environmental Protection asked the public for reaction to the 1991 plan to use in preparing a water level plan for the coming year. Officials with state parks and fisheries departments also participated.

The DEP is trying to strike a balance between all the competing uses on the lake in hopes of reaching a compromise that everyone can accept.

But the meeting proved there are no easy answers to the question of appropriate water levels on a lake that is both a vital natural resource and the economic backbone of the region.

While the lower lake levels brought back State Park beaches and saved aging seawalls on the west shore, for example, the change meant grounded docks in a Raymond cove.

Most speakers at the hearing called for a return of higher water levels. Some told stories of how boats were damaged on rocks in once-safe areas, and the shock of not being able to swim after Aug. 1.

"Do what is right for the majority and do what is right for Sebago Lake," said Randy Shaffer of the Sebago Lake Boating Club.

S.D. Warren Co. controls lake levels though the volume of water it pulls through its Eel Weir hydroe-

Please see SEBAGO, *Page* 10B

Department of Conservation
MAINE LAND USE REGULATION COMMISSION
State House Station 22, Augusta, Maine 04333
Telephone (207) 287-2631 or (800) 452-8711
Telecopier (207) 287-2400

This report is a Best Management practice for Maine Lakes. The Sebago 401 Flow Plan is not.

COMMISSION DECISION
IN THE MATTER OF

Kennebec Water Power Company

Findings of Fact and Decision

Water Quality Certification Application WQC-0002
Moosehead Project

The Maine Land Use Regulation Commission, at a meeting of the Commission held October 20, 1994, at Augusta, Maine, after reviewing the application and supporting documents submitted by Kennebec Water Power Company, Inc. for Water Quality Certification WQC-0002, public comments, agency review and staff comments, and other related materials, pursuant to 38 M.R.S.A. section 464 et seq., Executive Order #16 FY 91/92, and Section 401 of the Federal Water Pollution Control Act (Clean Water Act) makes the following Findings of Fact:

1. Applicant: Kennebec Water Power Company
P.O. Box 103
8 Water Street
Waterville, Maine 04462

2. Date of Application for Water Quality Certification: December 3, 1993

3. Name of Project: Moosehead Project (Moosehead Lake)

4. Location of Project:

Project Facilities

Big Squaw Township, Piscataquis County
Sapling Township, Somerset County
Taunton and Raynham Academy Grant, Somerset County

Impoundment

Townships within Piscataquis County:

Big Squaw Township, Kineo Township, Northeast Carry Township, East Middlesex Canal Grant Township, Days Academy Grant Township, Spencer Bay Township, Lily Bay Township, Town of Beaver Cove, Harfords Point Township, Cove Point Township, and Town of Greenville

Townships within Somerset County:

Sapling Township, Taunton and Raynham Academy Grant, Sandbar Tract Township, Rockwood Strip Township, Tomhegan Township, Little W Township, Seboomook Township

retaining walls at either end. The three foot thick slab measures 50 feet long by 48 feet wide. A steel bridge and gate support structure extends between the two retaining walls, supporting gate guides for the six 6 foot 4 inch wide wooden slide gates.

C. The project impoundment (Moosehead Lake) occupies approximately 74,200 acres at normal full pond elevation. The impoundment is 35 miles long and 15 miles wide. Normal full pond elevation is at elevation 1029.0 feet (NGVD), with a 7.5 foot maximum physical operating range (el. 1029.0 feet to el. 1021.5 feet). The useable storage capacity within this 7.5 foot operating range is 544,770 acre-feet. Current operation, under informal agreement with the Maine Department of Inland Fisheries and Wildlife, provides for an annual fall draw down of approximately 4.5 feet, (elevation 1024.5 feet) in order to protect lake trout spawning areas. The maximum depth of the lake is 240 feet.

Existing Project Operation

11. A. The East and West Outlet Dams at Moosehead Lake, located at the headwaters of the Kennebec River, provide the major control for river flows. Five water storage facilities including Moosehead Lake are located in the upper basin of the Kennebec River. First Roach Pond on the Roach River and Brassua Lake on the Moose River both drain into Moosehead Lake. Flagstaff Lake on the Dead River and Moxie Pond (Moxie Stream) flow into the Kennebec below the project impoundment. Total available storage in the upper river is estimated at 46.3 billion cubic feet; 23.7 billion cubic feet of which is stored in the project impoundment. Water release is regulated to provide uniform flows to downstream hydroelectric and industrial users, as well as to benefit fisheries, recreational users, municipal sewage treatment plants, and to provide flood control.

B. The First Roach Pond and Brassua Lake impoundments located upstream of the project impoundment, and the Flagstaff Lake and Moxie Pond impoundments entering the Kennebec River downstream of the impoundment, are not included for purposes of this certification application. First Roach Pond is not a FERC licensed impoundment requiring state water quality certification at this time, and the Brassua Lake impoundment (Brassua Project, FERC #2612) license does not expire until March 31, 2012. The Flagstaff Lake impoundment (Flagstaff Project, FERC #2612) license expires December 31, 1997, and the owners of the Moxie Project (FERC #2613) have applied to surrender their FERC license.

C. During spring runoff, normally by June 1st of each year, the impoundment is allowed to fill to full pond capacity, an elevation of 1,029 feet. During the summer, the impoundment is maintained within 1 to 1 1/2 feet of full pond capacity to benefit summer recreational usage of the lake. Annual seasonal drawdowns averaged 2.9 feet from 1972 to 1988, but may fluctuate

Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Service concur with these conclusions.

22. Other Aquatic Life

A. (1) Impoundment. Since 1972, the average ice-out date for the impoundment has been May 10. The mean water level at that time has been 6 inches below full pond, at elevation 1028.5 ft., with the lake typically reaching full pond by May 21. Lake water levels begin dropping slowly after July 2. The annual average impoundment drawdown has been 2.9 feet, while the average summer drawdown has been less than or equal to 1 foot. Such drawdowns potentially affect those species which rely upon wetland and shoreline habitat, including waterfowl, wading and shoreline birds, and aquatic furbearers such as beaver, muskrat, otter and mink. The wetlands bordering the impoundment are characteristic of those occurring around waterbodies with stable water levels, where a combination of saturated substrates and low temperatures inhibit the decomposition of organic matter and the release of nutrients. Dominant wetland plant species surrounding the impoundment include black spruce, northern white cedar, leatherleaf, sweet gale, tussock sedge, wool grass and sphagnum moss. The remaining shoreline is characteristically rocky and steep sided, or gradually sloping stretches of sand and gravel.

(2) Between June 5 and July 17 of 1991, the applicant conducted a population and habitat evaluation survey of the impoundment to document common loon nesting, nesting site availability, and the effects of current lake level management upon loon nesting. The nesting success rate of the common loon is used as a sensitive indicator of the effects of water level management regimes on shore nesting species. Water level increases of 6 inches or more commonly flood nests, while decreases of greater than 1 foot may strand loons from their nests and increase opportunity for nest predation. Of six pairs of common loons nesting during the study period, one pair successfully hatched two chicks by July 17, while another pair was incubating a single egg. A water level decrease of two inches was directly attributed to one nest failure; other nest failures appeared to be caused by predation not attributable to water level fluctuation, and possible human disturbance leading to nest abandonment.

(3) The effects of water level fluctuation on waterfowl, wading birds and shorebirds, and aquatic furbearers were considered in the Lake Level Management Study conducted by the applicant. As with loons, waterfowl and shorebirds nesting close to the shoreline are affected by rising impoundment levels causing nest flooding. Brood rearing habitat may also be adversely affected by fluctuations;

however, wetlands providing brood rearing habitat are generally located along inlet streams which provide buffering from summer water level decreases in the impoundment. Migrating shorebirds can also benefit from additional roosting and foraging areas as lake levels drop during the summer months.

(4) Falling water levels during the late fall and winter may prevent beaver and muskrat from obtaining food resources during critical winter months. If food caches or lodges are dewatered and subsequently frozen, beaver will be forced to seek food and shelter in areas with more stable water levels. Weight loss, lower reproductive rates, and possible death of beavers due to exposure may result from excessive drawdowns. Muskrats are also sensitive to drawdowns which may restrict access to marsh food resources. Mink populations are not as dependent upon stable water levels as beaver and muskrat. Although typically associated with aquatic habitat, mink will forage on land as well, preying on rodents as well as fish. Otters require aquatic habitat for foraging, and may be limited to open waters such as stream inlets into the impoundment, or open streams, during the winter. Otter den sites along the lakeshore and inlet streams become vulnerable to predation if exposed during lake drawdowns.

(5) Based upon its assessments and the IFIM studies, the Maine Department of Inland Fisheries and Wildlife concludes the applicant's lake level management, during years of average annual precipitation, would result in minimal negative effects upon nesting loons, shorebirds and waterfowl. To ameliorate impacts upon nesting birds, the Department recommends the applicant obtain full pond as soon as possible after ice-out, and maintain relatively stable water levels in the lake until mid July. Thereafter, the drop in water levels between mid-July and mid-August should remain at the current average drawdown of 1 foot or less. The Department also concludes that while winter lake drawdowns of greater than 6 feet may affect an over-wintering beaver population, such drawdown effects on mink, muskrat and otter are likely to be minimal.

B. (1) East and West Outlets. The abundance of phytoplankton and zooplankton originating in the Moosehead impoundment provides a stable food source for filter feeding benthic macroinvertebrates within the East Outlet and the West Outlet. Net spinning caddis flies (Hydropsychidae) and black flies (Simuliidae) are the dominant macroinvertebrates within the East Outlet and the upper portion of the West Outlet, within 1,000 feet of the West Outlet dam. These areas are characterized by extremely high numbers and densities of macroinvertebrates, with low species diversity and high taxonomic similarity. The lower

B. Wildlife species found to be utilizing the impoundment wetlands included waterfowl such as the common loon, black and ring-neck ducks, Canada geese, and common and red-breasted mergansers. Signs of beaver, otter, white-tailed deer and moose were also found within the wetland areas.

C. Primary productivity of the wetlands was found to be low, with marginal production export and food chain support value to the impoundment. Due to low interspersion of vegetation and water within the impoundment wetlands, the wetlands were not found to function as sites for large, diverse populations of invertebrate aquatic organisms.

D. Wetlands within the impoundment system are currently affected by the natural forces generated through wind, waves and ice action. Results of the wetland study demonstrate that current lake level management, in particular, the typical winter drawdown of 2 to 4 feet, has slowed the loss of wetland habitat by reducing the erosion of ice action. Operation of the impoundment in a run-of-river or full pond mode throughout the year would increase wetland erosion during fall storms and winter/spring ice action.

E. Eco-Analysts, Inc. concluded that wetlands would be further enhanced primarily by maintaining lake levels at 1 foot below full pond (el. 1,029 feet) until ice-out to avoid adverse impacts to wetlands by the forces of moving ice.

F. In response to the suggested wetland enhancement measure, the applicant has commented it believes that a number of potential problems would develop if the suggested lake level change were adopted: Delayed filling of the impoundment during a dry year creates the risk of not reaching full pond during the summer, thus adversely affecting existing wetlands and creating unstable water levels; and unstable or decreasing water levels would potentially harm nesting waterfowl and other wildlife, as well as negatively affecting impacting recreational use of the lake. As the current lake level management regime was shown to benefit impoundment wetlands, the applicant proposes no additional wetland enhancement measures.

24. Recreation, Fishing and Navigation

A. Moosehead Lake and portions of the East and West Outlet areas provide approximately 91,000 "angler-days" annually and support both coldwater and warmwater fisheries. According to the results of the Recreation Study for the Outlets of Moosehead Lake, prepared by Land and Water Associates in October of 1991, during the period from late May through the end of September in 1990, an estimated 7,300 recreationists visited the East Outlet alone. The number of recreationists using the West Outlet is described as only a small fraction of the number visiting the East Outlet, estimated to be hundreds rather than thousands of visitor-days per year. Extensive opportunities for recreation activities, including boating, camping, swimming, hunting,

A. The continued operation of the project as proposed will result in the affected waters being suitable for drinking water after disinfection (Class GPA) or after treatment (Class A and Class AA);

B. The continued operation of the project as proposed (including the proposed enhancements) will result in the affected waters being suitable for recreation in and on the water;

C. The sport fisheries supported by project waters are a recreational resource of statewide significance. The continued operation of the project as proposed (including the proposed enhancements) will result in the affected waters being suitable for fishing;

D. The continued operation of the project as proposed (including the proposed enhancements and proposed minimum flow rates) will result in the affected waters being suitable for navigation; and

E. The continued operation of the project as proposed (including the proposed enhancements) will result in the affected waters being suitable as habitat for fish and other aquatic life, provided that the applicant maintains the minimum flows, target flows and impoundment levels proposed herein.

2. The continued operation of the project as proposed will result in the attainment of classification standards for dissolved oxygen in the affected waters.

3. The continued operation of the project as proposed will result in the narrative Class GPA standards being met in impoundment waters, and at least Class A and Class AA standards, with regard to direct discharges and the transfer of pollutants, being met in the affected waters of the East and West Outlets, provided the project is operated in accordance with the conditions of this certification. To the extent that project waters, both in the impoundment and downstream, exceed the standards of these classifications, the existing water quality will be maintained.

4. The continued operation of the project as proposed will result in Class C standards for aquatic life and habitat being met in the affected waters of East Outlet and the West Outlet, in that waters are of sufficient quality to support all species of indigenous fish, and the proposed project operation would maintain the structure and function of the resident biological community.

5. The continued operation of the project will comply with the State's antidegradation policy, in that the applicant's proposed operation of the Moosehead Project would result in the attainment of classification standards for the Project's waters. The applicant's proposed operation of the Moosehead Project would further comply with the State's antidegredation policy in that existing resources, including fisheries, other aquatic life, aquatic habitat, and wetland habitat will be maintained, and existing uses such as fishing, boating and other recreation activities will be maintained as proposed by the applicant, and, in accordance with the conditions of this certification.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

November 25, 2002

REF: FERC #2984 - Eel Weir Hydroelectric Project
FPL Energy Maine Hydro LLC
Notice of Scoping Meetings and Site Visit and
Soliciting Scoping Comments for the Eel Weir Project
(ER 0919)

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Dear Ms Salas:

This is in response to the Federal Energy Regulatory Commission's (Commission) September 27, 2002 Notice of Scoping Meetings and Site Visit and Soliciting Scoping Comments for the Eel Weir Project, located on the Presumpscot River, at the outlet of Sebago Lake, in Cumberland County, Maine.

The U.S. Fish and Wildlife Service (Service) has reviewed the Commission's Scoping Document 1 (SD1), and is providing the following written comments regarding the proposed Environmental Assessment (EA). These comments are being provided for technical assistance only. They do not constitute the views and comments of the Department of the Interior.

GENERAL COMMENTS

We generally concur with the cumulative and project-specific issues that are identified in SD1. Recommendations for specific modifications to the Commission's proposed analysis of cumulative and incremental environmental issues are provided below in more detail.

3. consult with resource agencies regarding the need for upstream and downstream American eel passage at the Eel Weir Project following (1) installation of upstream and downstream eel passage and (2) monitoring results demonstrating that eels are utilizing the passage facilities at all downstream projects on the Presumpscot River;

4. replace the existing wetlands monitoring program required as part of the 1997 FERC Order with a similar wetlands monitoring program that will be undertaken every five years;

5. upon license issuance, evaluate opportunities to establish a conservation easement on lands around the bypassed reach with the Town of Windham or Land for Maine's Future Board; and

6. plan any changes to current land use to be consistent with the aesthetic character of the project area.

The Service is recommending that the Commission consider additional measures as described below to protect fish, wildlife, and recreational resources, and mitigate for the continuing impacts of the project.

4.2.3 Aquatic Resources

Impoundment Fluctuations

The applicant is proposing to operate the lake with an annual fluctuation of 4.15 to 6.15 feet in accord with the LLMP. The Sebago Lake 2001 Lake Level Assessment study was conducted to assess the effects of lake level fluctuations on fish and wildlife resources using the Sebago Lake shoreline. Results indicate that water level fluctuations impact those species/life stages using the shallow (0 to 6 feet of depth) littoral zone. Effects on individual fish species/life stages may be direct (physical action occurring to individual fish, such as stranding) or indirect (disturbance or limitation of preferred habitat, and reduction of available prey species, both invertebrate and fish). Spawning (egg) and fry stages are the most vulnerable to direct effects, due to limited mobility and their requirement for cover by aquatic vegetation.

Lowered water levels in the fall can dewater aquatic beds and render them unsuitable as cover and foraging areas for wildlife. Sustained low water levels through the winter may make aquatic beds unsuitable for wildlife that overwinter in mud, or under the cover of water and ice. Continued lowering of water levels can kill hibernating wildlife exposed in the drawdown zone. Forested wetlands are impacted when lake level fluctuations dewater the soils and allow the frost line to penetrate deeper into the ground, thereby diminishing their value to hibernating amphibians and reptiles.

Lowered water levels in the fall and winter also affect the distribution and species composition of vegetated wetlands, especially aquatic beds and emergent wetlands, by exposing the plants to freezing and desiccation. Plant species that are intolerant to winter exposure often are absent or severely restricted.

The Service recommends that the Commission consider the impacts of lake level manipulation on the flora and fauna that inhabit the drawdown zone. We note that current operations will continue to impact fish and wildlife resources that utilize the littoral zone. We recommend that any license for the project contain terms and conditions that will eliminate or minimize these impacts. Such measures should include limits on the degree and seasonal occurrence of drawdowns.

Shoreline Protection

For a lake the size of Sebago Lake (29,184 acres), the amount of vegetated wetlands habitat (721.46 acres) is extremely limited. This undoubtedly is due to heavy shoreline development, although project operations may also have had an impact on the distribution and abundance of wetlands. The Sebago Lake 2001 Lake Level Assessment documents that the remaining wetland habitat has a high value for fish and wildlife. We recommend that the Commission require the development of a shoreline management plan to protect this habitat and the fish and wildlife resources that utilize these areas.

Bypass Reach Minimum Instream Flow

The bypassed reach provides a year-round fishery for resident riverine salmonid fish, with 54% of the annual use occurring between November 1 and March 31.[2] Stocking of salmonids by the Maine Department of Inland Fisheries and Wildlife (MDIFW) occurs both during the spring and fall to meet heavy angling demand in the Eel Weir bypass. Continuous instream flows will be required in the bypass reach to protect aquatic resources, maintain adequate water quality, sustain the resident riverine fish populations, and provide angling opportunity throughout the year.

The applicant conducted an Instream Flow Incremental Methodology (IFIM) study to evaluate the instream flow needs in the bypassed river reach at the project. The results of the study indicate that optimum flows for the evaluation species and lifestages ranged from 200 to 440 cubic feet per second (cfs). The applicant is proposing minimum flows to the Eel Weir bypassed reach of 25 cfs from November 1 - March 31, 75 cfs from April 1 - June 30, 50 cfs from July 1 - August 31, and 75 cfs from September 1 - October 31 of each year. We are continuing to evaluate the results of the instream flow studies, and will be formulating our recommendations to the Commission after consulting with the MDIFW.

---

[2]Maine Department of Inland Fisheries and Wildlife, Comments on the Federal Energy Regulatory Commission Draft Environmental Impact Statement (0159D); S.D. Warren, Presumpscot River Projects, November 26, 2001.

4.2.4 Terrestrial Resources

Many fish and wildlife species native to the project area require wetlands and/or riparian areas to fulfill specific life cycle requirements. The highly developed nature (private and commercial camps, year-round homes, marinas) of most of the Sebago Lake shoreline continues to threaten fish and wildlife habitat. Lake level fluctuations also impact wetland habitat and the associated high value fish and wildlife resources associated with the shoreline. The riparian area along the bypass reach and tailrace provides important wildlife habitat, and also serves as a vegetated travel corridor along the Presumpscot River for wildlife. We recommend that the Commission require a shoreline management plan, or similar conservation measures, prepared in consultation with the state and federal resource agencies and the public.

4.2.5 Recreational Resources

The Eel Weir project area is heavily utilized for fishing, boating and other forms of outdoor recreation. We recommend that the long-term adequacy of existing access facilities be assessed, and a recreation plan developed that identifies the location and design of additional measures that would be provided to meet increased public needs.

The applicant developed a Draft Recreation Plan which is contained in the application. The plan identifies public recreation in the project area and documents annual population growth and use of recreational facilities. Day-use activities have increased over the past decade, and will likely continue to do so as the regional population grows. Three private marinas have restricted, or will soon restrict boat launching to full-season patrons, which will increase the overall need for day-use launching facilities. There also has been a dramatic increase in the use of the Eel Weir bypass by shore anglers that will result in the need for improved permanent access to that area.

The plan concludes that the capacity of existing recreational access sites in the project area is generally adequate, and that market-driven development or expansion of private recreation facilities should serve most future needs of the public. Consequently, there is no commitment on the part of the applicant to provide enhancements for recreational access.

Equal consideration of recreational values and needs is a specific requirement of the FPA. We recommend that the Commission require the licensee to play a more active role in assuring that project purposes related to recreation are met through development of a final Recreation Plan.

Thank you for the opportunity to respond to the Commission's notice and request for comments on the scoping document for the Eel Weir Hydroelectric Project. If you have any questions, please contact Larry Miller at (207) 827-5938.

Sincerely yours,

John P. Warner
Acting Supervisor
New England Field Office

IMPACTS OF WATER LEVEL REGULATION ON WETLANDS OF THE GREAT LAKES

DRAFT Report

By:

Douglas A. Wilcox
U.S. Fish and Wildlife Service
National Fisheries Research Center-Great Lakes
Ann Arbor, Michigan

James E. Meeker and Joan Elias
University of Wisconsin
Madison, Wisconsin

For:

International Joint Commission
Levels Reference Study
Working Committee 2
Natural Resources Task Group

November, 1992

Sebago 401 states a natural lake would drop 2' not 5'

0.49 m (1.6 ft). This scenario would likely result in development of stable plant communities at various elevations.

Model 1. Plant communities of transects 2, 3, and 4 would decrease in Model 1 wetlands under the 5-Lake Optimized scenario (see Tables 4-6). The stable communities of transect 1 would not be affected, and the stable deep water emergent communities of transect 5 would increase. This scenario would result in less wetland diversity than any of the other scenarios.

Model 2. Vegetation similar to transects 2 and 4 would decrease under the 5-Lake Optimized scenario in Model 2 (see Tables 4-6). Vegetation similar to transects 3 and 5 would increase, and the stable plant communities of transect 1 would not be affected. The major change from the Basis of Comparison would be the 58% loss of transect 2 vegetation.

Conclusions -- Lake Ontario Scenarios. The Basis of Comparison, Basis of Comparison Wet/Dry, 1958d mod, 1977a mod2, and 5-Lake Optimized scenarios extend the moderation of fluctuations that has existed since the mid-1970s. The lack of high lake levels has allowed floating cattail mats to form, purple loosestrife and other exotics to thrive, and shrub and old field communities to take over higher elevations. If no actions are taken to change the manner in which Lake Ontario levels are regulated, the species richness of the wetlands will likely decline as competitive dominants eliminate more and more species and are themselves unchecked by environmental conditions. **The lack of multi-year fluctuations in these regulation scenarios makes them unacceptable from the standpoint of wetlands protection.** In addition, the 5-Lake Optimized scenario was developed assuming pre-knowledge of all future supplies; this scenario cannot be achieved in the real world.

SMHEO 50 suffers from the same major problem as the other regulation scenarios--it lacks a long-term cyclic pattern of peak summertime high lake levels with intermittent low summertime highs. Short-term variability under this scenario results in changes in vegetation, but those changes do not have the desired effect. The diverse communities of transect 3 increase, but the diverse communities of transect 2 decrease and there is no desired decrease in the stable submersed aquatic vegetation of transect 5. **This scenario is also unacceptable from the standpoint of wetlands protection.**

Under any regulation scenario that does not allow natural water-level cycles to occur, wetland and aquatic plant communities would be altered from the natural condition. Aquatic invertebrates that use plants for food and cover would either lose habitat directly or lose diversity of habitat (Kraft 1988, Wilcox and Meeker 1992). Nesting, rearing, and feeding habitat for a number of bird species would be altered if plant communities were shifted to dense stands of emergent vegetation or if water-levels changed at the wrong time of year (Reiser 1988). Large fluctuations in water levels could also affect mammals, such as muskrats (Thurber et al. 1991, Wilcox and Meeker 1992). Fish populations could be most affected by alteration of wetlands. Effects could range from lack of access to spawning areas to loss of nursery habitat to loss of adult feeding habitat to loss of invertebrate prey (Kallemeyn 1987a, 1987b, Wilcox and Meeker 1992).